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- (30) Priority Data:  
60/088,431 8 June 1998 (08.06.1998) US
- (71) Applicant: OSIRIS THERAPEUTICS, INC. [US/US];  
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- (72) Inventors: THIEDE, Mark, A.; 319 Pond View Court,  
Forest Hill, MD 21050 (US). PITTENGER, Mark, F.;  
108 Southway, Severna Park, MD 21146 (US). MBAL-  
AVIELE, Gabriel; Apartment 1G, 8488 Greystone Lane,  
Columbia, MD 21045 (US).
- (74) Agents: OLSTEIN, Elliot, M. et al.; Carella, Byrne, Bain,  
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Roseland, NJ 07068 (US).
- (81) Designated States (*national*): AL, AM, AT, AU, AZ, BA,  
BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES,  
FI, GB, GD, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP,  
KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,  
MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,  
SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM,  
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- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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(54) Title: *IN VITRO* MAINTENANCE OF HEMATOPOIETIC STEM CELLS

(57) Abstract: The present invention is directed to human mesenchymal stem cells isolated from a tissue specimen, such as marrow cells, and to the method of co-culturing isolated mesenchymal stem cells and/or mesenchymal stem cell-derived adipocytes with hematopoietic progenitor cells such that the hematopoietic stem cells retain their phenotype.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 6 C12N5/08 C12N5/10 //A61K35/12,A61K48/00

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**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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